



Fiscal Year 2008

Remediation Division Annual Report

July 1, 2007 – June 30, 2008

It is the mission of the Montana Department of Environmental Quality to protect, sustain and improve a clean and healthful environment to benefit present and future generations.

It is the mission of the Remediation Division to protect human health and the environment by preventing exposure to contaminants released to soil or water, and to oversee compliance with state and federal laws and regulations.

Remediation Division

Purpose: The Remediation Division is one of four divisions under the Montana Department of Environmental Quality (DEQ). The Division is responsible for overseeing investigation and cleanup activities at state and federal Superfund sites, reclaiming abandoned mine lands, implementing corrective actions at sites with leaking underground storage tanks, and overseeing groundwater remediation at sites where agricultural and industrial chemical spills have caused groundwater contamination. The purpose of these activities is to protect human health and the environment; to prevent exposure of potential human and ecological receptors to hazardous or deleterious substances that have been released to soil, sediment, surface water, or groundwater; and to ensure compliance with applicable state and federal regulations.

The division's Mine Waste Cleanup and Hazardous Waste Site Cleanup bureaus and their respective sections and programs facilitate site cleanup. Program staff includes bureau chiefs, section supervisors, environmental science specialists, reclamation specialists, and other technical program staff. The Division Administrator oversees and ensures program administration. The Division Administrator's Office includes the office manager and administrative professional staff, the fiscal officer and staff, and the public information officer.

Mine Waste Cleanup Bureau

Abandoned Mines Section

Purpose: Montana's Abandoned Mines Section (AMS) is responsible for cleanup and reclamation of historic (pre-1977) mining-related disturbances. In effect since 1980, Montana's program is regulated by federal and state statutes, and by Montana's Approved Abandoned Mine Reclamation State Plan published at 30 CFR Part 926.

Program Highlights: 2008 was the first year of the increased funding resulting from passage of the 2006 amendments to the Surface Mining Control and Reclamation Act. The 2006 amendments extend the Abandoned Mined Land (AML) fee collection authority for an additional 15 years and more than double the dollar value of the AML grant Montana receives. The AMS will increase staffing to effectively commit the

increased funds toward on-the-ground reclamation.

The section continued year two of three years of construction on the Snowshoe Mine in Lincoln County. The Snowshoe project will remove mine waste and tailings from the floodplain and stream channel of Snowshoe Creek and, in conjunction with the U.S. Forest Service (USFS), place these wastes in an engineered repository located in a high and dry location on national forest system lands.

Construction also continued on the Trail Creek Coal Mitigation Project in Park and Gallatin Counties. The Trail Creek Coal Mitigation project will eliminate hazards and water quality degradation associated with abandoned coal mines in the Livingston Coal Field.

With the U.S. Department of the Interior, Bureau of Land Management (BLM), the section worked on an agreement to expand and incorporate additional mine wastes from the Great Divide Ski Area into the Bald Butte Mine Reclamation Project, Lewis and Clark County. The agencies sited the joint project repository for project wastes on a nearby BLM parcel. Construction on the Bald Butte project is scheduled to start in 2009.

The section also worked with the BLM to develop a draft Memorandum of Agreement for use of the Wickes mine waste repository to dispose of wastes from the Frohner Mine Reclamation Project, Jefferson County. This agreement, when implemented, will allow the Wickes mine waste repository to be reopened and waste from the Frohner Mine Reclamation Project to be placed in the Wickes repository.

At the Belt Coal Mine Acid Mine Drainage Control Project in Cascade County, assessment of hydrologic influences from surface and groundwater sources continued. This information will be used to evaluate design of an underground bulkhead system for source control of acid mine drainage.

A Purchase Agreement was also completed with the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Justice to acquire property from private parties and the USFS for a mine waste repository. This purchase enables the section to address long-term problems with the McLaren tailings in Soda Butte Creek. Ultimately, the quality of water entering Yellowstone National Park will be improved.

And finally, the program took public comment and prepared bid documents and contract specifications for the Toston Smelter Mine Reclamation Project in Broadwater County in preparation for construction to begin in FY 2009.

Construction Services Section

Purpose: The Construction Services Section of the Mine Waste Cleanup Bureau is responsible for the remedial cleanup of 22 miles of Silver Bow Creek extending from Butte to the Warm Springs Ponds. Funding for the project is from a cash-out settlement with the Atlantic Richfield Corporation. The Department is the lead agency for the project and conducts operations with oversight provided by the EPA.

The Construction Services Section is also responsible for the design and remedial construction of 43 miles of stream bank and associated flood plain extending from Warm Springs Ponds to areas west of Garrison Junction.

Program Highlights: Construction on miles nine and ten in the Ramsay area continues. A sediment detention pond in the Fairmont area was designed and constructed in preparation for FY 2009 stream construction in the Fairmont to Opportunity area. Design of FY 2009 construction in the Fairmont to Opportunity area was completed and advertised for bid. Characterization and design of the Durrant Canyon area began. Compost procurement, application, seeding and weed control is ongoing.

Construction Services Section personnel, in cooperation with DEQ legal staff participated in confidential settlement discussions with the EPA, U.S. Department of Justice and federal trustees, and the Montana Natural Resource Damage Program (NRDP) on a draft Consent Decree (CD) and Superfund Memorandum of Agreement (SMOA) to implement a state-led combined remedy/restoration cash-out settlement with Atlantic Richfield for the remedial clean up of the Clark Fork River. Settlement was completed for the Clark Fork River Operable Unit in February 2008 with signature of the Consent Decree by all parties. Public comments were accepted on the Consent Decree during a 60-day public comment period. The Consent Decree provides the structure for how Atlantic Richfield will "cash out" of its cleanup responsibilities by providing over \$168 million to the State of Montana, which will perform the remedy and restoration activities with EPA and NPS oversight. The Federal Court approved the final settlement in the summer of 2008.

Federal Superfund Section

Purpose: The Federal Superfund Section of the Mine Waste Cleanup Bureau is responsible for administering remedial cleanup activities, in consultation with the EPA, at 14 federal Superfund sites in Montana. Cleanup at the Montana Pole National Priority List (NPL) site and the Troy Operable Unit of the Libby Asbestos NPL Site is led by the DEQ. Thus, the DEQ initiates and conducts remedial activities at these two sites in consultation with the EPA.

Program Highlights: Thousands of dust, soil, and other scientific samples were collected from approximately 1200 properties in Troy, 535 parcels were inspected, 170 homes were identified as meeting asbestos removal criteria, and six were scheduled for cleanup. Concurrently, the DEQ continued to provide input on investigations and removals conducted in Libby under EPA leadership.

Work also continued at the Anaconda Smelter site on Community Soils, Old Works, and Regional Water Waste and Soils projects. The section provided state input on residential yard replacements, attic and yard sampling, remediation of commercial/industrial properties, activities to minimize blowing dust concerns, and surface and groundwater investigations.

Remediation of the Milltown Reservoir Sediments Operating Unit involved the breaching of the historic Milltown Dam in March 2008. The DEQ provided input on the pilot dewatering test and bypass channel constructability analysis and continued remedial design work, design for the HWY 200 bridge work, and fish monitoring and groundwater studies. The section completed a Geotechnical Report and an Engineering Evaluation/Cost Analysis (EE/CA) for the Stimson Lumber Cooling Pond, which will be posted for public comment in FY 2009.

The section continued remediation of groundwater and soil at Montana Pole. Operations and maintenance were continued at Libby Groundwater and Idaho Pole. Groundwater monitoring continued at Lockwood Solvent Ground Water Plume. Ongoing development of institutional controls took place at the Anaconda, Carpenter Snow and East Helena sites with the EPA and the appropriate county. Five-year reviews were completed at the Basin Mining Area and Mouat. The section conducted or participated in public meetings for Burlington Northern (BN) Somers and East Helena Asarco. The section commented on the draft Record of Decision (ROD) for the Carpenter/Snow Creek Mining District Town of Neihart Operable Unit.

In the Upper Tenmile Creek Mining Area, the section conducted remediation for residential soils and the county road, investigated potential potable water sources, conducted mine site reclamation, participated in the development of a Record of Decision Modification, and presented at the National Remedy Review Board.

Progress was made on bankruptcy agreements in the Barker/Hughesville Mining District, and with cash-out settlement discussions with the EPA, state and federal trustees, and reviewing and commenting on draft consent decree documents on the Clark Fork River Operating Unit (OU), leading to the settlement described above.

Hazardous Waste Site Cleanup Bureau

Tank Cleanup Program

Purpose: The Petroleum Release Section was restructured in fall 2007 into two separate sections: The Petroleum Technical Services Section (PTS) and the LUST Brownfields Section (LBS). Both sections administer cleanup (corrective action) requirements for petroleum releases (leaks and spills) from underground storage tanks under the Montana Storage Tank Act. These programs both oversee the investigation of contamination and subsequent cleanup at release sites, including but not limited to service stations and convenience stores throughout Montana.

PTS focuses on releases from known sources at underground storage tank facilities with solvent responsible parties. In addition, PTS administers cleanup regulations at additional sites regulated under the Petroleum Storage Tank Cleanup Act.

LBS focuses on federally-funded cleanup work for releases with unknown sources and at underground storage tank sites with insolvent or recalcitrant responsible parties, administers cleanup requirements on federally-owned sites, and implements the Department's Brownfields Program at petroleum sites (see further discussion below).

Joint activities completed by the programs this year include revisions to and updating of various guidance documents, the programs' ranking systems, and risk based corrective action standards, as described below.

Petroleum Release Statistics: In FY 2008, 34 new petroleum releases were confirmed and 47 petroleum releases were closed. There were 1,615 active release sites as of June 30, 2008.

Program Highlights: The sections updated Guidance on Groundwater Sampling Methodologies and Surveying Requirements and posted them on the DEQ webpage.

The sections revised the 30-day release form to comply with the 2005 Energy Policy Act. They jointly adopted new DEQ-7 standards for groundwater and reduced monitoring requirements at 1000 sites that were placed in a long-term monitoring status using the EPA Monitored Natural Attenuation (MNA) Protocol. They conducted technical review and completed risk-based (RBCA) closures at 47 Leaking Underground Storage Tank sites. In addition, the sections worked closely with the Petroleum Release Compensation Board and the Waste and Underground Tank Bureau to produce the quarterly *MUST News*. This publication keeps owners and operators informed about evolving technology and regulation, as well as program activities.

Revised Site Priority Ranking System

The site priority ranking system was significantly updated to better manage the DEQ workload and to better communicate the priority of remediation project needs to the Petroleum Tank Release Compensation Board (PTRCB). This allows the PTRCB to determine which sites it will fund for cleanup first. Like the old system, the new system focuses on human health and environmental risk, where significant risks to any key receptor, pathway, or factor will elevate site priority. The staff continues to refine the prioritization system as it re-ranks active petroleum release sites using the new system. This information is available at www.deq.mt.gov.

Updated Risk-Based Corrective Action

The DEQ adopted updated concentrations for risk-based screening levels (RBSLs) for certain petroleum constituents where newly available scientific data has become available. These changes are published in the updated Risk Based Corrective Action (RBCA) guidance that was adopted into rule in December 2007. An update to Tier 1 RBCA risk-based screening levels was completed in 2008 and posted to the DEQ's internet

website. All of the updated concentration values are higher than the previous values. As a result there has been a reduction in the number of confirmed and suspected releases being identified. Additionally the scope of investigations can be reduced and closure of sites can be accelerated, resulting in reduced cleanup costs at individual sites.

LBS Accomplishments

The LUST Trust Program initiated contracted services totaling \$727,371, which enabled the Department to conduct underground site investigation, remediation, and removal of underground storage tanks at four sites, some with prolonged enforcement histories.

A LUST Trust grant of \$279,000 funded a Phase II Electrical Resistance Heating (ERH) Project for the Ronan LUST Trust site. The project is addressing the substantial residual source area that remains at the site. The project was implemented in 2007 and completed during 2008. At the Ronan site, the LUST Trust Program also received funding from the American Petroleum Institute (API) to support a graduate student Master's Degree research project through the University of Montana (UM) Geoscience Department. The research project seeks to better define subsurface contaminant conditions. DEQ LBS staff are working with the graduate student, focusing research efforts on the heat plume generated by the electrical resistance heating project.

The LBS staff recovered approximately \$21,400 through legal cost recovery mechanisms.

The program also implemented a horizontal drilling approach at the Columbus Town Pump site, which is considered innovative. Horizontal drilling is common oil field technology, but has been introduced at tank sites only recently.

PTS Accomplishments

The PTS Section regulated two successful source area removal projects. At Malfunction Junction Sinclair, Helena, highly contaminated source material was removed and the site was successfully sold. The property is now occupied by a retail business. At Michael's Exxon, Kalispell, a large amount of saturated source material and free product gasoline was removed as part of the Michael's emergency response action, conducted to address the release in July 2007. This was necessitated by a release of approximately 10,000 gallons.

Site closures were identified by the EPA as the greatest priority for state programs in 2006. Emphasis on this aspect of the program continued through 2007 and into 2008.

Site Response Section

Purpose: The Site Response Section (SRS) administers the Comprehensive Environmental Cleanup and Responsibility Act (CECRA) and the Water Quality Act (WQA) to investigate and clean up hazardous substances at sites not addressed by the federal Superfund program. Historical waste disposal activities and spills at these sites caused contamination of air, surface water, groundwater, sediments, and/or soils with hazardous or deleterious substances. Under CECRA, sites are ranked based on potential risks to human health and the environment.

Program Highlights: Because staff and financial resources are insufficient to address the 209 contaminated sites listed in Montana, CECRA activities focus primarily on 37 of the 57 maximum and high priority sites on the list. Shortfalls in the Resource Indemnity Trust interest income have resulted in shortfalls in the funding to the Environmental Quality Protection Fund (EQPF), preventing the program from being fully staffed. In addition to routine reviews and approvals conducted, the Site Response Section completed significant major actions at several of the state's high and maximum priority sites.

Progress continues at the BN Livingston Shop Complex facility. The free product recovery system and bioventing of petroleum contaminated soils was expanded. Indoor air sampling prompted installation of mitigation systems in some buildings.

The DEQ issued its proposed remedy for the Kalispell Pole and Timber, Reliance Refinery, and Yale Oil Corporation facilities, which are collectively referred to as the “K.R.Y.” Site, in December 2007. After considering all information submitted during the public comment period, the DEQ selected the final remedy for the Record of Decision (ROD), which addresses the final cleanup of the Site. The ROD is the official documentation of how the DEQ considered the remedial alternatives and why the agency selected the final remedy. It was issued in July 2008. The Department is working with Kalispell officials and community members to plan cleanup activities. The cost of the remedy is estimated at approximately \$32 million. The cost of the alternatives evaluated ranged from \$4.6 million to \$121 million. The DEQ has settled with all but one of the defendants in a lawsuit over payment for remediation of the site. In March 2008, staff participated at trial in district court.

The section worked towards finalization of a report of environmental investigations that determined the extent and magnitude of contamination at the former Berg Lumber Mill in Lewistown. The report shows areas where cleanup is needed. For instance, dioxins and pentachlorophenol (also called “penta,” which is a wood-treating chemical) are found in the southeastern part of the site. Petroleum is also found in a few smaller areas on the western half of the site where the buildings once stood.

Preliminary results from a September 2007 vapor intrusion investigation at the Bozeman Solvent Site (former dry cleaner location) confirmed the presence of tetrachloroethene (PCE) vapors exceeding screening levels beneath the slab and inside the Hastings Bookstore and CVS Pharmacy. The DEQ is evaluating what work will be required next.

The DEQ launched the remedial investigation at the Mike Horse Dam and the Upper Blackfoot Mining Complex in August 2007. The DEQ investigation is being funded with a \$2 million dollar appropriation from the 2007 Legislative Session. In April 2008, a \$16 million agreement settled years of struggle to fund some clean up of the historic Upper Blackfoot River area. The settlement agreement was reached between the State of Montana, the U.S. Forest Service (USFS), the Atlantic Richfield Company (ARCO) and Asarco. The agreement was negotiated by the Montana Department of Justice (DOJ) and the Department of Environmental Quality, and was subject to a 30-day public comment period. It was approved by the U.S. District Court in June 2008.

Considerable resources were also spent responding to the Asarco bankruptcy litigation and defending other DEQ claims. Negotiations are ongoing.

At the CMC Asbestos Bozeman CECRA site, DEQ approved a City of Bozeman Supplemental Investigation work plan on December 6, 2007, and Tetra Tech, Inc. (contractor for the City of Bozeman) completed field work under the plan on December 31, 2007. Remedial work is expected next fiscal year.

Under the Voluntary Cleanup and Redevelopment Act (VCRA), three voluntary cleanup plans were submitted to SRS for review in FY 2008. These voluntary cleanups are typically for low and medium priority sites.

Database and Website

The SRS completely restructured the SRS and State Superfund database to support ease of project management for project officers and Remediation Division managers. The Section created a new project time tracking feature that allows staff to manage their daily time log, track project time, and do all reporting electronically. This will save significant time and create an electronic record to support recovering costs from potentially liable persons.

The SRS updated and expanded the Site Response Section and State Superfund website to facilitate members of the public, local governments, and other state and regulatory agencies retrieving programmatic and site-specific data. Interested parties may conduct self-service data retrieval without remediation staff assistance. It is also expected to provide more meaningful data to the public.

The SRS groundwater program addressed ongoing work at 86 sites and closed six existing sites.

Brownfields Programs

Purpose: Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off undeveloped, open land and improves and protects the environment.

The Remediation Division's Brownfields Program is supported by both the LBS and the SRS. Both sections have brownfields coordinators who maintain information about brownfields in Montana and assist communities in redevelopment of blighted properties.

Program Highlights: In calendar year 2007, the Division's Brownfields Program received \$976,426 in grant funding to establish and enhance its state response programs. The brownfields coordinators for these programs work together closely to provide outreach and technical guidance to communities that are actively working toward revitalization of brownfields. Contracted services were used to support these goals.

Brownfields accomplishments this year included: working on targeted brownfields assessments at Davis Post Yard in Willow Creek, Berg Lumber Mill in Lewistown, Shelby Refinery in Shelby, and Kalispell Feed & Grain in Kalispell; publishing the second year of a semi-annual newsletter, *The Outreach*, in coordination with Permitting and Compliance Division's Hazardous Waste Section and the Department's publications staff; and drafting eight acknowledgement letters for applications for competitive EPA assessment grants, revolving loan funds, and cleanup grants.

Division Administrator's Office

Fiscal Services

Purpose: Fiscal Services manages contracts, agreements, task orders, procurement, and invoicing processes. It monitors budgets, coordinates grant and other applications, completes reports, and conducts other financial services for the Division.

Program Highlights: Fiscal Services managed 55 consultant contracts, agreements with other state agencies and counties throughout the state, and 92 task orders under these contracts and agreements. The fiscal staff, shifting from quarterly to monthly billing, sent out a total of 306 invoices for reimbursement of costs incurred by the Division. This resulted in cost recovery of \$3,975,851. In addition, staff updated and expanded the CECRA costs recovery procedures document.

The Remediation Division continues to manage cooperative agreements with the EPA for various Superfund and groundwater cleanup activities and the cooperative agreement with the Office of Surface Mining for the abandoned mine activities. Quarterly Budget Status Reports (BSRs) were completed to assist program managers with budget management in all programs, and fiscal staff prepared applications and semiannual and quarterly reports for the federal agreements.

Administrative Professionals Team

Purpose: The Administrative Professionals Team (APT) provides specific and general support to the Hazardous Waste Site Cleanup and Mine Waste Cleanup bureaus using knowledge of office practices; state, department and division programs; technical terminology; computer hardware and software; and a variety of policies and procedures. This staff is responsible for tasks associated with payroll, travel arrangements and reimbursements, document production, filing system maintenance, database maintenance, information dissemination, and other general administrative and clerical support. In addition, day-to-day management of building issues is handled by APT staff.

Program Highlights: 2008 presented the APT staff with opportunities to work closely with other division and building staff. Major remodeling efforts were completed and the last two sections were able to return to their regular work areas by December 1, 2007. The elevator has made working in this building significantly easier. In June, new front and side doors were installed. The Abandoned Mines section replaced standard office furniture with modular work areas and increased work space by two cubicles. Teamwork and cross training among the APT staff were integral in the smooth operation of division and building business. The APT staff also improved records management effectiveness.

Public Information Officer

Purpose: The Public Relations Specialist acts as the Division's public information officer and provides timely information to the public and news media about environmental remediation and reclamation developments. The information officer also works to involve the public in decisions that impact communities.

Program Highlights: The position was vacant until the final quarter of FY 2008. The information officer coordinates publication of *MUST News*, a quarterly publication about Montana Underground Storage Tanks; writes the annual report, site updates, fact sheets, community involvement plans and other materials; and generates news coverage and responds to inquiries from the public and news media. The information officer coordinated an asbestos public education campaign informing the public about the attic insulation, Karstolite, and asbestos from the Karst Mine near Big Sky. The campaign involved collaboration among local health departments and governments, county extension offices, libraries and news media in the distribution of brochures and information.

Remediation Division Indicators – July 1, 2007 to June 30, 2008

Indicator	Actual
(Fiscal Year)	2008
Active Sites	1,565
Inactive Sites	7,390
Site Activities	727
Sites Closed/Delisted	64
Cost Recovery Invoices	306
Costs Recovered	\$3,975,851
Contracts + Task Orders	147
Contract Costs	\$19,297,642
Public Comment Periods	15
Public Meetings	28